

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of
Musslin et al.

Serial No.: **10/583,702**

Filed: **June 20, 2006**

For: **Supply Device for Ultraviolet Lamps Used
in the Treatment of Water**

Attorney's Docket No: **4195-035**

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) Examiner: Cameron J. Allen
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) Group Art Unit: 1797
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APPEAL BRIEF

(I.) REAL PARTY IN INTEREST

The real party in interest is OTV SA S.A.

(II.) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

(III.) STATUS OF CLAIMS

Claims 12-35 are pending in this application. Claims 12-35 are rejected and are appealed herein.

Claims 1-11 are canceled.

(IV.) STATUS OF AMENDMENTS

All amendments have been entered.

(V.) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 12 is directed to a water treatment device comprising at least two discharge lamps for photo-chemically treating water. See *e.g.*, spec. p. 6, ll. 6-9 and p. 9, ll. 14-15, and Figure 1. In addition, the water treatment device includes a first electrical circuit disposed in the immediate vicinity of the discharge lamps and electrically connected to the discharged lamps. See *e.g.*, spec. p. 6, ll. 13-15 and p. 9, ll. 19-23, and Figure 2. The first electrical circuit is configured to control a warm up phase of the discharge lamps. See *e.g.*, spec. p. 6, ll. 18-20 and p. 9, ll. 19-20. A second electrical circuit is disposed remotely from the discharge lamps and electrically connected to the first electrical circuit. See *e.g.*, spec. p.6, ll. 21-26, p. 9, ll. 14-18, p.

10. ll. 1-5, and Figure 2. The second electrical circuit is configured to control an operational phase of the discharge lamps. See *e.g.*, spec. p. 2, ll. 16-17 and p. 6, ll. 12-17, 21-26.

Claim 21 is directed to a method of photo-chemically treating water with two or more discharge lamps. See *e.g.*, spec. p. 6, ll. 6-9 and p. 9, ll. 14-15, and Figure 1. The method comprises controlling a warm up phase associated with the two or more discharge lamps with a first electrical circuit disposed in the immediate vicinity of the discharge lamps. See *e.g.*, spec. p. 6, ll. 13-15 and p. 9, ll. 19-23, and Figure 2. In addition, the method requires controlling an operational phase associated with the two or more discharge lamps with a second electrical circuit disposed remotely from the discharge lamps. See *e.g.*, spec. p.6, ll. 21-26, p. 9, ll. 14-18, p. 10. ll. 1-5, and Figure 2.

Claim 25 is directed to a water treatment device. The device comprises two or more ultraviolet discharge lamps. See *e.g.*, spec. p. 6, ll. 6-9 and p. 9, ll. 14-15, and Figure 1. A first electrical circuit is disposed a first distance from the ultraviolet discharge lamps. See *e.g.*, spec. p. 6, ll. 13-15 and Figure 2. The first electrical circuit is configured to control a warm up phase of the discharge lamps. See *e.g.*, spec. p. 6, ll. 18-20 and p. 9, ll. 19-20. A second electrical circuit is disposed a second distance from the ultraviolet discharge lamps. See *e.g.*, spec. p.6, ll. 21-26, p. 9, ll. 14-18, p. 10. ll. 1-5, and Figure 2. The second distance is greater than the first distance. See *e.g.*, spec. p.6, ll. 21-26 and Figure 2. The second electrical circuit is configured to control an operational phase of the discharge lamps. See *e.g.*, spec. p. 2, ll. 16-17 and p. 6, ll. 12-17, 21-26. The first electrical circuit is disposed less than 0.5 meters from the two or

more ultraviolet discharge lamps and the second electrical circuit is disposed at least 2.0 meters from the ultraviolet discharge lamps. See *e.g.*, spec. p. 7, ll. 12-15.

Claim 31 depends from claim 13 and requires that the first electrical circuit is disposed less than 0.5 meters from at least one of the discharged lamps and includes a first capacitor in series with a transformer. See, *e.g.*, spec. p. 7, ll. 12-15, p. 10, ll. 6-9 and Fig. 2. The second electrical circuit is disposed at least two meters from both discharge lamps. See, *e.g.*, spec. p. 7, ll. 12-15. The second electrical circuit includes a power supply, a second capacitor in series with a first switch, a third capacitor in series with a second switch, and an inductor in series with the second and third capacitors and the first and second switches. See, *e.g.*, spec. p. 10, ll. 1-5 and Fig. 2.

Claim 33 depends from claim 14 and requires that the first electrical circuit is disposed less than 0.5 meters from one of the discharge lamps and includes first and second capacitors. See, *e.g.*, spec. p. 7, ll. 12-15, p. 10, ll. 27-29 and Fig. 3. The second electrical circuit is disposed at least 2.0 meters from the discharge lamps and includes a power supply, a third capacitor in series with a first switch, a fourth capacitor in series with a second switch, and two parallel inductors disposed in series with the third and fourth capacitors and first and second switches. See, *e.g.*, spec. p. 7, ll. 12-15, p. 10, ll. 24-27 and Fig. 3.

(VI.) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether independent claims 12 and 21 are anticipated by U.S. Patent Publication No. 2003/0015478 (Kuennen).

Whether independent claim 25 is rendered obvious over Kuennen.

Whether dependent claims 31 and 33 are rendered obvious over Kuennen.

(VII.) ARGUMENT

A. The Law of Anticipation and Obviousness

The first step of an anticipation analysis is claim construction, and the second step involves comparing the properly construed claim to the prior art. *Helifix Ltd. V. Blok-Lok, Ltd.*, 208 F. 3d 1339, 1346 (Fed. Cir. 2000). Claims themselves provide substantial guidance as to the meaning of particular claim terms. The context of the surrounding words of the claim is considered in determining the ordinary and customary meaning of the claim terms. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). And, of course, the construction given a claim term must be consistent with the specification and how a person of ordinary skill in the art would construe the term in light of the specification. Once the claim terms are properly construed, a finding of anticipation under 35 U.S.C. § 102 is proper only if the cited reference discloses each and every limitation of the claimed invention.

The Patent Office has the burden under 35 U.S.C. § 103 to establish a prima facie case of obviousness. This burden is met by showing that a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. This determination is ultimately a legal question, but is based on a series of factual factors. These factors include (1) the scope and content of the prior art, (2) the differences between the prior art and the claimed invention, and (3) the level of ordinary skill in the pertinent art. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1731, 82 U.S.P.Q.2d 1385, 1391 (2007).

The determination of obviousness is not a rigid rule that applies to each case, but rather is flexible and expansive. *Id.* at 1739. The determination should include an analysis of the pertinent facts for the case and an explanation as to why the invention is obvious. In view of this flexible and expansive approach, the PTO must articulate the facts for the specific case, and provide an explicit explanation of the reasoning to support a conclusion that the invention is obvious. The PTO cannot rely on conclusory statements. *In re Kahn*, 78 U.S.P.Q.2d 1329, 1335 (Fed. Cir. 2006).

B. Independent claims 12 and 21 are Not Anticipated by Kuennen

Representative claim 12 is as follows:

A water treatment device comprising:
at least two discharge lamps for photo-chemically treating water;
a first electrical circuit disposed in the immediate vicinity of the discharge lamps and electrically connected to the discharge lamps, wherein the first electrical circuit is configured to control a warm up phase of the discharge lamps; and
a second electrical circuit disposed remotely from the discharge lamps and electrically connected to the first electrical circuit, wherein the second electrical circuit is configured to control an operational phase of the discharge lamps.

1. The Examiner misconstrues the claim term "remotely."

Independent claims 12 and 21 both require that the second electrical circuit be disposed "remotely" from the discharge lamps. The Examiner erroneously concludes that the claim term "remotely" merely requires that the second circuit be "a distance away from the first [circuit]." See, Final Office Action, p. 2. Moreover, the Examiner states that "remotely" refers to an indefinite distance. See, Final Office Action, p. 2. However, as discussed below, the claim term "remotely" has a definite meaning and requires that the second electrical circuit be disposed farther away from the lamps than the first electrical circuit.

"Remotely" is a term of reference and its construction depends on other terms found in the claims. That is, the term "remotely" is relative and its meaning depends on its context. Thus, to properly construe the claim term "remotely" one must look to the surrounding words in the claim. Claims 12 and 21 require that the first electrical circuit be disposed "in the immediate vicinity of" the discharge lamps and require that the second electrical circuit must be disposed "remotely" from the discharge lamps. Thus, the words "in the immediate vicinity" give definite meaning to the claim term "remotely" and require that the second electrical circuit be disposed farther away from the lamps than the first electrical circuit. Because the claim term "remotely" describes the relative position of the second electrical circuit with respect to the lamps, the term "remotely" cannot merely require that the second electrical circuit be disposed "a distance away from the first [circuit]" as suggested by the Examiner (emphasis added). This construction set forth by the Examiner is wrong. The construction is divorced from the claim language and the specification. Any construction that does not address the distance between the second circuit and the lamps is incorrect. As shown above, the Examiner fails to address the distance between second circuit and the lamps, as required by the claim.

The term "remotely" must be construed relative to the lamps and thus, the proper construction of the term "remotely" requires that the second electrical circuit be disposed farther away from the lamps than the first electrical circuit.

2. The Examiner has failed to show how Kuennen discloses the claimed second electrical circuit

The Examiner argues that Kuennen's starter circuit 314 and resonant lamp circuit 152 are analogous to the claimed first and second electrical circuits respectively.

However, resonant lamp circuit 152 is not disposed remotely from the lamps, i.e., farther away from the lamps than starter circuit 314, as required by claims 12 and 21. Instead, as shown in Kuennen's Figure 6, dashed lines representing resonant lamp circuit 152 fully encompass starter circuit 314. Thus, resonant lamp circuit 152 incorporates starter circuit 314 into its circuitry. That is, starter circuit 314 is not separate and distinct from resonant lamp circuit 152, but instead starter circuit 314 forms a part of resonant lamp circuit 152. Because starter circuit 314 forms a part of the circuitry in resonant lamp circuit 152, these circuits must be disposed the same distance away from the lamps. Accordingly, resonant lamp circuit 152 cannot be disposed remotely from the lamps, i.e., farther away from the lamps than starter circuit 314. For at least this reason, Kuennen does not disclose each of the claimed limitations set forth in independent claims 12 or 21.

Moreover, even if one assumes that resonant lamp circuit 152 does not incorporate starter circuit 314 into its circuitry, it is evident that at least a portion of resonant lamp circuit 152 is disposed closer to the lamps than starter circuit 314. Thus, this portion of resonant lamp circuit 152 is not disposed remotely from the lamps, i.e., farther away from the lamps than starter circuit 314. However, claims 12 and 21 require that the entire second electrical circuit - not merely a portion thereof - be disposed remotely from the lamps. Since a portion of the resonant lamp circuit 152 is not disposed remotely from the lamps, it is erroneous to conclude that the entire resonant

circuit 152 is disposed remotely from the lamps. For this additional reason, Kuennen does not disclose each of the claimed limitations set forth in independent claims 12 or 21.

3. The Examiner's factual finding with respect to Kuennen's resonant lamp circuit 152 is erroneous.

Claims 12 and 21 require that the second electrical circuit be configured to control an operational phase of the discharge lamps. As understood by one of ordinary skill in the art, an operational phase takes over and controls the lamps after an initial warm-up phase. The Examiner alleges that resonant lamp circuit 152 meets this claimed limitation. However, nothing in Kuennen describes resonant lamp circuit 152 as controlling an operational phase of the lamps. That is, resonant lamp circuit 152 does not take over and control the lamps after an initial warm-up phase. Instead, resonant lamp circuits generally respond to selective signals having a specific frequency while discriminating against signals of different frequencies. Thus, resonant lamp circuit 152 in Kuennen only allows signals having a certain frequency to pass through and power the lamps. Accordingly, resonant lamp 152 merely acts as a "filter" of power received from the power source; it does not control or power the operational phase of the lamps. Thus, the Examiner has erroneously held that Kuennen's resonant lamp 152 controls an operational phase as required by the claims.

C. Independent claim 25 is Not Rendered Obvious Over Kuennen

Claim 25 is as follows:

A water treatment device comprising:
two or more ultraviolet discharge lamps;
a first electrical circuit disposed a first distance from the ultraviolet discharge lamps, wherein the first electrical circuit is configured to control a warm up phase of the discharge lamps;
a second electrical circuit disposed a second distance from the ultraviolet discharge lamps, wherein the second distance is greater than the first distance, and wherein the second electrical circuit is configured to control an operational phase of the discharge lamps; and
wherein the first electrical circuit is disposed less than 0.5 meters from the two or more ultraviolet discharge lamps and wherein the second electrical circuit is disposed at least 2.0 meters from the ultraviolet discharge lamps.

1. The Examiner's factual finding with respect to Kuennen's resonant lamp circuit 152 is erroneous.

Claim 25 also requires that the second electrical circuit be configured to control an operational phase of the discharge lamps. However, as discussed above, Kuennen's resonant lamp circuit 152 does not control an operational phase of the lamps. Instead, resonant lamp circuits generally respond to selective signals having a specific frequency while discriminating against signals of different frequencies. Thus, resonant lamp circuit 152 in Kuennen only allows signals having a certain frequency to pass through and power the lamps. Accordingly, resonant lamp 152 merely acts as a "filter" of power received from the power source; it does not control or power the operational phase of the lamps. For this additional reason, the Examiner has failed to point out where the claimed limitations are taught or suggested in the prior art references, and thus, the rejection fails as a matter of law.

2. The Examiner's motivation to modify Kuennen does not support a *prima facie* case of obviousness.

In rejecting claim 25, the Examiner states that it would be obvious to position Kuennen's starter circuit 314 less than 0.5 meters from the lamps and position resonant lamp circuit 152 at least 2.0 meters from the lamps because "rearranging parts of an invention only involves routine skill in the art." See, Final Office Action, p. 6-7. However, as discussed above, resonant lamp circuit 152 incorporates starter circuit 314 therein and thus, resonant lamp circuit 152 cannot be positioned least 2.0 meters away from the lamps while keeping starter circuit 314 at less than 0.5 meters from the lamps. Starter circuit 314 is integrated within resonant lamp circuit 152 and thus will always be the same distance from the lamps as resonant lamp circuit 152. For at least this reason, Kuennen does not disclose or suggest each of the claimed limitations set forth in independent claim 25.

Further, it is improper for the Examiner to reject a claim while only providing the statement "rearranging parts of an invention only involves routine skill in the art." MPEP § 2144.04 clearly states that "[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). The Examiner has not provided any reason why one of ordinary skill in the art would modify the positioning of Kuennen's circuitry. Accordingly, the Examiner has failed to set forth a *prima facie* case of obviousness.

In addition, the claimed spacing of the first and second electrical circuits allow the operational components in the second circuit to be disposed away from the water and thus, eliminates the need for protective coverings over the operational components that would otherwise be needed if these components were disposed near the water. Thus, the claimed positioning of the first and second electrical circuits is not a mere rearrangement of parts, but instead provides a novel and unique way to eliminate the need of protective coverings disposed over the operational components in many water treatment systems.

D. Claim 31 is Not Rendered Obvious Over Kuennen

Claim 31 is as follows:

The water treatment device of claim 13 wherein the first electrical circuit is disposed less than 0.5 meters from at least one of the discharged lamps and includes a first capacitor in series with a transformer; wherein the second electrical circuit is disposed at least two meters from both discharge lamps and includes a power supply, a second capacitor in series with a first switch and a third capacitor in series with a second switch, and an inductor in series with the second and third capacitors and the first and second switches.

1. The Examiner's Factual Findings regarding Kuennen are Erroneous.

In rejecting claim 31, the Examiner states that "Kuennen teaches the water treatment device....wherein the first electrical circuit is disposed less than 0.5 meters from at least one of the discharged lamps and includes a first capacitor is in series with a transformer; wherein the second electrical circuit is disposed at least two meters from both discharge lamps and includes a power supply, a second capacitor in series with a first switch and a third capacitor in series with a second switch, and an inductor in series with the second and third capacitors and the first and second switches." However, these conclusory findings are not supported with any evidence. That is, the Examiner

has not pointed to anything in Kuennen showing these limitations. As discussed above, it is improper for the Patent Office to rely on conclusory statements such as that shown above. The analysis should set forth each claim limitation and point out where each limitation is found in the prior art. Because the Patent Office failed to show how Kuennen teaches or suggests each of the claimed limitations, the obviousness rejection fails to set forth a *prima facie* case of obviousness.

In addition, Applicant notes that in Kuennen's figures and the corresponding text, nothing indicates the presence of a transformer in the alleged first electrical circuit (starter circuit 314) as required by claim 31. Further, nothing indicates the presence of three capacitors, the second and third of which are in series with first and second switches respectively in the alleged second electrical circuit (resonant lamp circuit 152). For this additional reason, claim 31 is not rendered obvious over Kuennen.

E. Claim 33 is Not Rendered Obvious Over Kuennen

1. The Proffered Motivation to Modify Kuennen is Conclusory

Claim 33 is as follows:

The water treatment device of claim 14 wherein the first electrical circuit is disposed less than 0.5 meters from one of the discharge lamps and include first and second capacitors; and wherein the second electrical circuit is disposed at least 2.0 meters from the discharge lamps and includes a power supply and a third capacitor in series with a first switch and a fourth capacitor in series with a second switch, and two parallel inductors disposed in series with the third and fourth capacitors and first and second switches.

In rejecting claim 33, the Examiner states that it would have been obvious to modify Kuennen such that "the first electrical circuit is disposed less than 0.5 meters from the two or more ultraviolet discharge lamps and wherein the second electrical circuit is disposed at least 2.0 meters from the UV discharge lamps since it has been

held that rearranging parts of an invention only involves routine skill in the art." See, Final Office Action, p. 9. However, as discussed above, resonant lamp circuit 152 incorporates starter circuit 314 within its circuitry, and thus resonant lamp circuit 152 cannot be positioned a farther distance away from the lamps than starter circuit 314. Since starter circuit 314 is integrated within resonant lamp circuit 152, the two circuits will always be the same distance from the lamps.

Further, it is improper for the Examiner to reject a claim while only providing the statement "rearranging parts of an invention only involves routine skill in the art." This conclusory motivation does not support a *prima facie* case of obviousness. MPEP § 2144.04 clearly states that "[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). The Examiner has not provided any reason why one of ordinary skill in the art would modify the positioning of Kuennen's circuitry. Accordingly, the Examiner has failed to set forth a *prima facie* case of obviousness.

As previously discussed, the claimed spacing of the first and second electrical circuits allow the operational components in the second circuit to be disposed away from the water and thus, eliminates the need for protective coverings over the operational components that would otherwise be needed if these components were disposed near the water. Thus, the claimed positioning of the first and second electrical

circuits is not a mere rearrangement of parts, but instead provides a novel and unique way to eliminate the need of protective coverings disposed over the operational components in many water treatment systems.

In addition, the Examiner states that "[i]t is also within ordinary skill in the art at the time of the invention to use a third and fourth circuit since it has been held that duplication of parts involves only routine skill in the art." However, nothing in claim 33 requires a third or a fourth circuit as suggested by the Patent Office. Instead, claim 33 requires third and fourth capacitors. In particular, the claim requires that the first electrical circuit include first and second capacitors while the second electrical circuit includes third and fourth capacitors. In addition, the claim requires that the third capacitor is in series with a first switch while the fourth capacitor is in series with a second switch. These limitations are not required of the first and second capacitors in the first electrical circuit. Accordingly, claim 33 does not merely recite a duplication of parts as suggested by the Examiner. For this additional reason, the Examiner has failed to set forth a *prima facie* case of obviousness.

In addition, Applicant notes that Kuennen's figures and corresponding text, do not indicate the presence of a four capacitors, a third and fourth of which are in series with a first and second switch respectively in the alleged second electrical circuit (resonant lamp circuit 152), as required by claim 33. Moreover, nothing in Kuennen's figures and the corresponding text describes or suggests two parallel inductors disposed in series with the third and fourth capacitors and the first and second switches in the alleged second electrical circuit, as required by claim 33. For this additional reason, claim 33 is not rendered obvious over Kuennen.

CONCLUSION

For the foregoing reasons, the Board is urged to reverse the Examiner's rejection of claims 12-35.

(VIII.) CLAIMS APPENDIX

12. A water treatment device comprising:

at least two discharge lamps for photo-chemically treating water;

a first electrical circuit disposed in the immediate vicinity of the discharge lamps

and electrically connected to the discharge lamps, wherein the first

electrical circuit is configured to control a warm up phase of the discharge

lamps; and

a second electrical circuit disposed remotely from the discharge lamps and

electrically connected to the first electrical circuit, wherein the second

electrical circuit is configured to control an operational phase of the

discharge lamps.

13. The water treatment device of claim 12 wherein at least two of the two or more discharge lamps are connected in series.

14. The water treatment device of claim 12 wherein at least two of the two or more discharge lamps are connected in parallel.

15. The water treatment device of claim 12 wherein the first electrical circuit comprises at least one capacitor electrically connected to at least one transformer.

16. The water treatment device of claim 12 wherein the first electrical circuit is disposed immediately adjacent to the discharge lamps.

17. The water treatment device of claim 12 wherein the discharge lamps comprise ultraviolet discharge lamps.

18. The water treatment device of claim 12 wherein the discharge lamps comprise mercury vapor discharge lamps.
19. The water treatment device of claim 12 wherein the first electrical circuit generates a voltage control signal, and wherein the voltage control signal controls the warm up phase of the discharge lamps.
20. The water treatment device of claim 12 wherein the first electrical circuit generates a current control signal, and wherein the current control signal controls the warm up phase of the discharge lamps.
21. A method of photo-chemically treating water with two or more discharge lamps, the method comprising:
- controlling a warm up phase associated with the two or more discharge lamps with a first electrical circuit disposed in the immediate vicinity of the discharge lamps; and
 - controlling an operational phase associated with the two or more discharge lamps with a second electrical circuit disposed remotely from the discharge lamps.
22. The method of claim 21 wherein the two or more discharge lamps are connected in series.
23. The method of claim 21 wherein the two or more discharge lamps are connected in parallel.

24. The method of claim 21 wherein the two or more discharge lamps comprise two or more ultraviolet discharge lamps.

25. A water treatment device comprising:

two or more ultraviolet discharge lamps;

a first electrical circuit disposed a first distance from the ultraviolet discharge lamps, wherein the first electrical circuit is configured to control a warm up phase of the discharge lamps;

a second electrical circuit disposed a second distance from the ultraviolet discharge lamps, wherein the second distance is greater than the first distance, and wherein the second electrical circuit is configured to control an operational phase of the discharge lamps; and

wherein the first electrical circuit is disposed less than 0.5 meters from the two or more ultraviolet discharge lamps and wherein the second electrical circuit is disposed at least 2.0 meters from the ultraviolet discharge lamps.

26. The water treatment device of claim 25 wherein the first distance comprises a relatively small distance, and wherein the second distance comprises a relatively large distance.

27. The water treatment device of claim 26 wherein the first distance is generally less than 0.5 meters, and wherein the second distance is generally greater than 2 meters.

28. The water treatment device of claim 25 wherein the first and second electrical circuits are separated by at least 1.5 meters.

29. The water treatment device of claim 25 wherein at least two of the two or more ultraviolet discharge lamps are connected in series.

30. The water treatment device of claim 25 wherein at least two of the two or more ultraviolet discharge lamps are connected in parallel.

31. The water treatment device of claim 13 wherein the first electrical circuit is disposed less than 0.5 meters from at least one of the discharged lamps and includes a first capacitor in series with a transformer; wherein the second electrical circuit is disposed at least two meters from both discharge lamps and includes a power supply, a second capacitor in series with a first switch and a third capacitor in series with a second switch, and an inductor in series with the second and third capacitors and the first and second switches.

32. The water treatment device of claim 31 including only two wires interconnecting the first electrical circuit with the second electrical circuit.

33. The water treatment device of claim 14 wherein the first electrical circuit is disposed less than 0.5 meters from one of the discharge lamps and include first and second capacitors; and wherein the second electrical circuit is disposed at least 2.0 meters from the discharge lamps and includes a power supply and a third capacitor in series with a first switch and a fourth capacitor in series with a second switch, and two parallel inductors disposed in series with the third and fourth capacitors and first and second switches.

34. The water treatment device of claim 33 including only three wires interconnecting the first and second electrical circuits.

35. The method of claim 21 including placing the first electrical circuit within 0.5 meters of the discharge lamps, and placing the second electrical circuit at least 2.0 meters from the discharge lamps.

(IX.) EVIDENCE APPENDIX

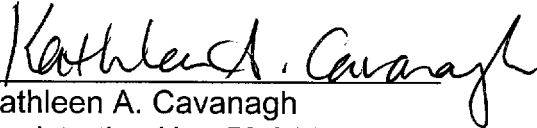
None.

(X.) RELATED PROCEEDINGS APPENDIX

None.

Respectfully submitted,

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